

REMARKS

Claims 1-6 remain pending. Favorable reconsideration is respectfully requested.

The present invention relates to a method for detecting negatively supercoiled DNA on interphase chromosomes in intact cells, by incorporating biotinylated psoralen into intact cells, irradiating the cells with long-wavelength UV rays, causing the cells to react with avidin which has been labeled with a color-developing substance, a fluorescent substance, or a chemiluminescent substance, and measuring developed color, emitted fluorescence, or emitted chemiluminescence of the cells. See Claim 1.

The present invention is also related to a method for detecting an intact cell containing negatively supercoiled DNA on interphase chromosomes, by incorporating biotinylated psoralen into intact cells, irradiating the cells with long-wavelength UV rays, causing the cells to react with avidin which has been labeled with a color-developing substance, a fluorescent substance, or a chemiluminescent substance, and measuring developed color, emitted fluorescence, or emitted chemiluminescence of the cells. See Claim 2.

The rejection of Claims 1-3 under 35 U.S.C. §102(b) over Matsumoto et al. is respectfully traversed. Matsumoto et al. is not available as prior art against the present application.

The present application was filed on November 4, 2003. As noted by the Examiner, Matsumoto et al. was published on November 25, 2002. Since the publication date of Matsumoto et al. is less than one year prior to the filing date of the present application, the reference does not qualify under 35 U.S.C. §102(b) as prior art against the present application. Moreover, since the Inventors named in the present application are the same as the authors named in the Matsumoto et al. publication, that reference also fails to qualify as prior art against the present application under 35 U.S.C. §102(b). Accordingly, withdrawal of this ground of rejection is respectfully requested.

The rejection of the claims under 35 U.S.C. §102(b) over Saffran et al. is respectfully traversed. The reference fails to disclose the claimed methods.

At the bottom of page 2 of the Office Action, the Examiner states:

Invention is drawn to a method of detecting negatively supercoiled DNA in an intact cell using a biotinylated psoralen probe.

However, that statement is simply incorrect. The invention is a method for detecting negatively supercoiled DNA on interphase chromosomes in intact cells. Significant by its absence in the Examiner's analysis of Saffran et al. is any mention of detecting DNA on interphase chromosomes in intact cells. That is because the reference is completely silent with respect to interphase chromosomes. There is simply no disclosure of detecting negatively supercoiled DNA on interphase chromosomes in intact cells.

In view of the foregoing, Saffran et al. fail to disclose detecting negatively supercoiled DNA on interphase chromosomes in intact cells. Accordingly, the reference fails to disclose the claimed methods. Therefore, withdrawal of this ground of rejection is respectfully requested.

The rejection of Claims 4-6 under 35 U.S.C. §103(a) over Matsumoto et al. in view of Chevalier et al. is respectfully traversed. Matsumoto et al. is not available as prior art against the present application.

The present application was filed on November 4, 2003. As noted by the Examiner, Matsumoto et al. was published on November 25, 2002. Since the publication date of Matsumoto et al. is less than one year prior to the filing date of the present application, the reference does not qualify under 35 U.S.C. §102(b) as prior art against the present application. Moreover, since the Inventors named in the present application are the same as the authors named in the Matsumoto et al. publication, that reference also fails to qualify as prior art against the present application under 35 U.S.C. §102(b).

Since Matsumoto et al. is not available as prior art against the present, the rejection based on that reference is unsustainable. Accordingly, withdrawal of this ground of rejection is respectfully requested.

The rejection Claims 4-6 under 35 U.S.C. §103(a) over Saffran et al. in view of Chevalier et al. is respectfully traversed.

As discussed above, Saffran et al. fail to disclose the claimed methods.

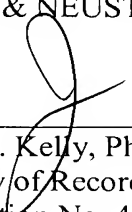
Chevalier et al. describe in situ hybridization using biotin and avidin. The reference has been cited for a description of the use of permeation-promoting agents. See the bottom of page 5 of the Office Action. Chevalier et al. fail to disclose detecting negatively supercoiled DNA on interphase chromosomes in intact cells.

In view of the foregoing, the combination of Saffran et al. in view of Chevalier et al. fail to suggest the claimed methods. Accordingly, Claims 4-6 are not obvious of those references. Withdrawal of this ground of rejection is respectfully requested.

Applicants submit that the present application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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